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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/628,881	07/28/2003	Mitsutaka Shimada		3871
26021	7590	10/05/2005		
HOGAN & HARTSON L.L.P. 500 S. GRAND AVENUE SUITE 1900 LOS ANGELES, CA 90071-2611			EXAMINER ADDISON, KAREN B	
			ART UNIT 2834	PAPER NUMBER

DATE MAILED: 10/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

EJL

Office Action Summary

Application No.

10/628,881

Applicant(s)

SHIMADA ET AL.

Examiner

Karen Addison

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 25 April 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) 12-21 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1-3 and 7-11 is/are rejected.
- 7) ☐ Claim(s) 4-6 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on 28 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Claims 12-21 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected method of Manufacturing claims, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 4/25/05.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-3 and 7-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hori (422).

Hori discloses a surface acoustic wave element in figs.(5-9) including a piezoelectric substrate (54) which includes one principle surface formed with interdigital electrodes(55) and which includes one principle surface formed with interdigital electrodes (55) and connector electrodes connected to the interdigital electrodes(56), a periphery sealing electrodes(57) a base substrate(53), that is connected to the connectors electrode and a periphery sealing conductor film(61), a periphery sealing conductor film (63) and an outer covering resin layer attached to cover another principle surface and a side surface of the surface acoustic wave element(see fig. 8, #78,#77). A tin or lead free solder can be used (col.6, lines 34-37). Hori does not explicitly teach the

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substrate materials thermal expansion coefficient, or various properties for the covering resin layer. However, it has long been held that a selection from among known suitable materials is within the skill expected of the routineer. Note that glass-ceramics and resin-inorganic fiber substrates as well as non-thermosetting resins are known for use with surface acoustic wave devices per se (official notice taken). Thus, selection of specific materials would have been obvious to one of ordinary skill in the art. Regarding claim 7 specifically, note that if the side surface covering resin did not inherently have the claimed properties, the layer would break in a self-revealing problem; which one of the ordinary skill in the art would predictably remedy by selection of a more suitable material.

Allowable Subject Matter

4. Claims 4-6 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Prior art fails to show, a relationship of $(S1/L1) < (S2/L2)$ is satisfied where the area of a vertical cross-section of the solder bump component is $S1$, the area of a vertical cross-section of the solder sealing component is $S2$, the soldering width of a vertical cross-section of the connector electrode formed on the surface acoustic wave element is $L1$ and the soldering width of a vertical cross-section of the periphery sealing electrode of the surface acoustic wave element is $L2$. Prior art also fails to show, the conductor width of the periphery sealing conductor film of the base substrate is larger than the electrode width of the periphery sealing electrode of the surface acoustic wave element, and

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periphery sealing conductor film and the configuration inner periphery of the periphery sealing electrode are generally configuration of inner periphery identical each other. Wherein the periphery sealing conductor film has a substantially uniform conductor width throughout the entire path thereof, and the width of the solder sealing component joined to the periphery sealing conductor film is identical to the conductor width of the periphery sealing conductor film.

Conclusion


Further cited are Furukawa(sealing resins),Baba(sealing resin) and Hori(920).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karen B. Addison whose telephone number is 571-272-2017. The examiner can normally be reached on 8:00 to 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Darren Schuberg can be reached on 571-272-2044. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

KBA
9/21/05


DARREN SCHUBERG
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800